Bruhat Bangalore Mahanagara Palike
Executive Engineer Yelahanka Division

Name of Work :- Development of roads and drains at Maruthinagara 4th main and cross roads Basaveshwaranagara and Shivanahalli surrounding areas in ward no:01of Yelahanka division (Package no-7)

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Sl No	Description of Work	Unit	BOQ Quantity	EXE Quantity	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21
1	Removing and refixing stone slabs of drains and pointing in CM (1:3) complete with all lead and lift as per the direction of engineer-in-charge	Sqm	1418.44	1418.44								
2	Earthwork excavation by manual means in ordinary soil invoiving in average horizontal throw up to 2m & an average lift upto 1.5m , excavated surface leveled & sides neatly dressed , the disposed earth to be levelled neatly after breaking of clods complete with all lead and lift as per the direction of engineer-in-charge	Cum	2596.46	2596.46								
3	: Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 320kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregates @ 0.46cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in ground floor level for roof slabs, staircase, lintles, and beams retaining walls, return walls, walls (any thickness) including attached plasters, columns, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM of machinery, curing,complete with all lead and lift as per the direction of engineer-in-charge	Cum	219.63	219.63								
4	Plain cement concrete 1:3:6 mix with crushed stone aggregate 40 m nominal size mechanically mixed, placed in foundation and compacted by vibration including curing complete with all lead and lift as per the direction of engineer-in-charge	Cum	425.72	425.72								
5	Providing and laying plain/reinforced cement concrete for side drains using M20 nominal mix concrete with OPC at 300 kgs. with 20mm and down size granite metal coarse aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed, well compacted for walls and bottom including centering, shuttering, cost of materials, HOM of machinery, curing etc., complete excluding cost of steel as per MORTH specification No. 1500, 1700, 2200. including cost of materials, labour, HOM complete with all lead and lift as per the direction of engineer-in-charge	Cum	606.64	606.64								

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6	Providing T.M.T. steel reinforcement for R.C.C. work including straightening, cutting, bending, hooking, placing in position, lapping and/or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per disign (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete with all lead and lift as per the direction of engineer-in-charge	Tonne	22.34	22.34	
7	Providing & laying precast drain cover slab of 100 mm thickness in CM 1:3 including cost of all materials, labour, curing, transportation, loading, unloading etc, complete with all lead and lift as per the direction of engineer-in-charge	Sqm	3143.38	3143.38	
8	Providing & laying precast drain cover slab of 250 mm thickness in CM 1:3 including cost of all materials, labour, curing, transportation, loading, unloading etc, complete as per the directions of the Engineer In Charge.(1.2 x 0.60 x 0.25)Data rate	Sqm	221.04	221.04	
9	Providing and fixing pre cast solid concrete kerb stones of size 450x150x400 mm made out of CC 1:2:4 and finished with CM 1:3 plastering and finishing cutting ete., complete with all lead and lift as per the direction of engineer-in-charge	No	8231.00	8231.00	
10	Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete with all lead and lift as per the direction of engineer-in-charge	Sqm	1296.26	1296.26	
11	Scarifying bituminous course 50mm to 75mm thick along with premix carpet / surface dressing by road roller attached with scarifier without disturbing the base and stacking the debris including cost of all labour charges, HOM of machineries complete with all lead and lift as per the direction of engineer-in-charge	sqm	671.51	671.51	
12	Excavation for roadwork in all types of soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location to a lead of 1.00 km and complete with all lead and lift as per the direction of engineer-in-charge	Cum	1160.25	1160.25	
13	Construction of granular sub-base Grading-V as sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/trap/basalt material, mixing in a mechanical mix plant at OMC, carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98% proctor density, complete with all lead and lift as per the direction of engineer-in-charge	Cum	426.30	426.30	

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14	Construction of dry lean cement concrete mix CC1:5:10 with OPC cement @160Kgs, with 25mm and down size graded granite metal coarse aggregate at 0.86cum and fine aggregates @ 0.58cum Sub-base over a prepared sub-grade with (coarse and fine aggregate conforming to IS: 383) aggregate cement ratio not to exceed 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content not to be less than 160 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 tonnes vibratory roller, finishing and curing complete with all lead and lift as per the direction of engineer-in-charge	Cum	505.53	505.53	
15	constructing un-reinforced, plain cement Pavements using Grade M-30 over a prepared base with OPC 360 kg/cum coarse aggregate at 0.69cum, fine aggregates at 0.46cum, Coarse and fine aggregate confirming to IS:383-2016 with Superplastizer at 3lts conforming to IS 9103-2008. mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micronthick polythene film, wedges, steel plates including levelling the form work as per drawing). & Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished with floaters in a continous operation including provision of contraction, expansion, construction and longitudinal joints, including groove cutting charges, joint filler, separation membrane of impermiable plastic sheet of 125 micron, sealant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades	Cum	489.78	489.78	
16	Providing, laying, spreading and compacting crushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed method of tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete with all lead and lift as per the direction of engineer-in-charge	Cum	47.52	47.52	
17	Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM ,including clearing of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per Specifications. MORTH Specification No. 502 Complete with all lead and lift and as per the direction of the Engineer-in-Charge.	Sqm	988.30	988.30	

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18	Providing and laying dense graded bituminous macadam using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10 complete in all respects complete as per specifications. Clause 505 of morth V revision using 40/60 TPH capacity H.M.P. with mechanical paver Gr-II (50mm to 75mm) with 4.5% VG-30 Bitumen.complete with all lead and lift as per the direction of engineer-in-charge	Cum	309.12	309.12	
19	Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM of machineries complete with all lead and lift as per the direction of engineer-in-charge	Sqm	11435.99	11435.99	
20	Providing and applying tack coat using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete with all lead and lift as per the direction of engineer-in-charge	Sqm	11435.99	11435.99	
21	Providing and laying bituminous concrete using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision. -using40/60 TPH capacity H.M.P. with Mechanical Paver Gr-II (30 mm to 40 mm) with 5.4% VG-30 Bitumen complete with all lead and lift as per the direction of engineer-in-charge	Cum	457.44	457.44	
22	Road Marking with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface:- Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete with all lead and lift as per the direction of engineer-in-charge	Sqm	638.40	638.40	

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